

ACTUATOR LATCH WITH VARIABLE RETENTION FORCE

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Abstract of the Disclosure

Apparatus for latching an actuator, such as used in a data storage device. A moveable electrical coil is disposed adjacent a magnetically permeable structure. The coil is latched by magnetic flux passing across a gap extending into the structure which establishes a retention force upon the coil. The coil is 10 subsequently unlatched by application of current to the coil which reduces the magnetic flux across the gap and hence, the magnitude of the retention force upon the coil. The current also concurrently induces movement of the coil away from the gap. The structure preferably comprises a unitary, c-shaped structure comprising a base member, a support member and a pole member, with the coil 15 configured to surround and travel along a lateral extent of the pole member. A permanent magnet is nested on the base member. A plate is preferably coupled to the coil for abutment across the gap.